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Handbook of Procedures Construction Grants Program for Municipal Wastewater Treatment Works

Environmental Protection Agency, Wash, D.C.

August 1976

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Handbook of Procedures

Construction Grants Program
for Municipal Wastewater
Treatment Works

TRANSMITTAL MEMORANDUM

No. 76-1

August 1976

Municipal Construction Division
Water Program Operations
Office of Water and Hazardous Materials

U.S. Environmental Protection Agency
Washington, D.C. 20460

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 19 1976

OFFICE OF WATER AND
HAZARDOUS MATERIALS
CONSTRUCTION GRANTS
TRANSMITTAL MEMORANDUM:
TM No. 76-1

SUBJECT: Revisions to Construction Grants Handbook of Procedures

FROM: John T. Rhett, Deputy Assistant Administrator for Water Program Operations (WH-546)

John T. Rhett

TO: All Regional Administrators
ATTN: Water Division Directors

PURPOSE:

The purpose of this memorandum is to transmit additions and corrections to the Construction Grants Handbook of Procedures based upon directives issued subsequent to its printing.

DISCUSSION:

As noted in Chapter I of the Handbook, it was intended that the Handbook be updated regularly so that it's dynamic characteristic would be maintained. To provide for this, changes to the text were to be conveyed by means of Transmittal Memoranda (TMs).

This is the first TM. It incorporates changes resulting from the issuance of Program Guidance Memoranda (PGMs) subsequent to the printing of the Handbook as well as those contained in Program Requirements Memoranda (PRMs) 76-1 and 76-2.

HANDBOOK REVISIONS:

(NOTE: All pages which were revised to reflect policy changes, were also modified to reflect the conversion of PGMs to PRMs as set forth in PRM 76-2. This practice will continue with the issuance of future TMs.)

1. Pages I-5 and 6: The Introduction was revised to include a discussion of the essence of the new issuance system as provided for in PRM 76-1.

2. Pages II-3 and 4: References to PRM 75-38 (PG-66), 2/9/76, which supersedes PG-47 (See TM 76-2) were added.

3. Pages III-5, 6 and 7: Page III-6 was revised to add a statement concerning the civil rights related responsibilities of the applicant to the section on Preapplication Conferences as called for in 40 CFR 8 and PRM 75-32 (PG-59), 2/11/76.

4. Page IV-5: A statement regarding the joint EIS/Assessment procedure ("piggybacking") was added to the discussion of "Review Procedures" (PRM 75-31 (PG-58), 9/2/75).

5. Page IV-24: The section on "Demographic Data" was revised to add a statement concerning the need to consider "minority areas not presently sewered" in accordance with PRM 75-32 (PG-59), 2/11/76.

6. Page IV-38: The previous item "f" was redesignated item "g" and a new item "f", concerning combined sewer overflows and stormwater discharges, as discussed in PRM 75-34 (PG-61), 12/16/75, was added.

7. Page IV-43: Item "f" under the "Review Procedures" section was changed to add a statement concerning the servicing of minority areas as provided for in PRM 75-32 (PG-59), 2/11/76.

8. Page IV-47: A reference to PRM 75-30 (PG-57), 9/8/75, was added as it impacts the "Review Procedures" pertaining to "Cost Estimates".

9. Pages V-13 and 14: Item "14" was revised to add a restriction against escalation clauses in construction contracts as called for in PRM 75-23 (PG-44), 12/9/74.

10. Page VI-30: A reference to PRM 75-37 (PG-65), 3/17/76, was added as it supports an element noted in the "Discussion" on "User Charge Systems".

11. Page VII-3: The second paragraph was revised to add a statement concerning allowable/unallowable costs related commitments made prior to the issuance of headquarters or other guidance/requirements (PG-64, 2/5/76).

12. Page VII-9: A reference to the eligibility of land for the disposal of residues from wastewater treatment was added to the section on "Site Acquisition" as expressed in PRM 75-39 (PG-67), 4/2/76.

13. Page VII-28: A statement concerning the basing of payments of the Federal share upon the amount of the current pay estimate less any amounts retained by the grantee was added to paragraph "4 - Interim Payments" in accordance with PRM 75-22 (PG-43), 11/18/74.

14. Appendix D: That portion of PRM 76-2 which lists the new PRM designations for those PGMs which have been retained should be placed in Appendix D for future reference.

FILING INSTRUCTIONS:

1. File this TM in Appendix D of the Grants Handbook.

2. Substitute the attached pages ("bottom" dated 8/76, TM 76-1) for the appropriate pages presently in the Handbook. Item 14 above should be placed in Appendix D.

Attachments

References:

Appropriate laws, regulations, Program Guidance Memorandums (PG), Program Requirements Memorandums (PRM), guidelines, technical bulletins, etc. are cited. Wherever laws or regulations are quoted directly, italics are used. Copies of such reference material can generally be found in the Manual of References, issued by the Municipal Construction Division, Office of Water Programs, in October 1975.

Some of the review procedures are self-explanatory or do not lend themselves to the above format. In these cases, the program requirements are briefly described.

4. Related Material

The review procedures in this Handbook describe the essence or minimum requirements necessary in processing of construction grants. More detailed information may be obtained by reading the reference materials which are identified throughout the text wherever they are applicable. Generally, references concerning technical matters have been limited to EPA publications.

The Handbook describes the requirements for processing construction grant applications and conducting related grant activities. However, differences in structure of Regional Office staffs may require some adjustment in the manner in which various review procedures are conducted.

5. Updating

The Handbook will be updated as changes in laws, regulations, or policy guidance occur. Responsibility for revising and updating the Handbook rests with the Policy, Procedure and Guidance Staff, Construction Operations Branch, Municipal Construction Division, HQ EPA. All changes will be issued from the Deputy Assistant Administrator for Water Program Operations.

In July 1976, EPA ceased to use Program Guidance Memoranda (PGM's) to communicate Construction Grant Program directives. In their place, an issuance system was established designed to differentiate between policy and operational matters. Included in the new system is a mechanism for insuring that the essence of emerging policy and procedure changes are concurrently readied for inclusion in the Handbook.

The new system consists of (1) Program Requirements Memoranda (PRM's) which convey program policy, (2) Program Operation Memoranda (POM's) which are for "housekeeping" matters and (3) Transmittal Memoranda (TM's) which dictate changes to the Handbook. TM's are of two types: (1) Those which direct changes in the Handbook growing out of the issuance of PRM's and (2) Those which serve to transmit Agency policy directly without the issuance of a related PRM. (This will be done when the nature of the change is such that it can be readily accommodated by a slight alteration of the text of the

Handbook.) POM's will not normally appear in the Handbook since they generally deal only with internal program matters and have no applicability outside EPA. (See PRM 76-1, 7/26/76). As part of the new system, certain PGMs were cancelled. Those which remain in effect have been redesignated as PRM's 75-1 through 75-40. (See PRM 76-2, 7/26/76, in Appendix D of this Handbook for details.)

As indicated above, revisions will be forwarded by a Transmittal Memorandum (TM). Each Transmittal Memorandum will be designated with a sequential number (e.g., TM: 76-1) indicating the fiscal year and number of the issuance and will provide specific instructions for removal of obsolute pages and exhibits and insertion of new material. *So that changes can be readily identified, text revisions will be printed in italics and underlined and*, on the bottom right side of each revised page will be shown the month and year of the revision.

The TM may be detached from the material transmitted and inserted in the appendix, "Transmittal Memoranda". On a yearly basis, for verification purposes, a listing of the changes will be distributed to holders of the Handbook.

6. Appendices

This Handbook contains the following appendices:

Appendix A: contains a schematic flow diagram for the processing of construction grants.

Appendix B: includes exhibits of frequently used OMB and EPA forms.

Appendix C: contains the sample checklist: "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports".

Appendix D: is labeled "Transmittal Memoranda" and is to be used to keep the Headquarters issuances on Handbook changes (TM's).

If the model of the basin predicts that water quality standards will not be met when all point sources achieve secondary treatment, the segment is classified as "water quality limited". The inputs to the model are varied with the result that waste load allocations are established for this segment and represent the minimum of treatment to be achieved by any future publicly owned wastewater treatment works.

It should be noted that in the 303 planning no direct controls are exercised to limit the non-point sources. In all cases, however, applicants for construction grants must comply with applicable basin plans.

Re: 40 CFR Part 130 and Part 131

4. Areawide Waste Treatment Management Plans

Section 208, Areawide Waste Treatment Management Plan, is another integral part of the State Continuing Planning Process. These plans are prepared for areas having substantial water quality control problems caused by urban-industrial concentration or other factors. The stream segments in these areas require comprehensive areawide planning to meet the water quality standards. Not only do these plans place limitations upon municipal and industrial point sources, they also address land use policies to control non-point sources, stormwater discharges, water supply and other limiting factors which may be controlled to achieve water quality standards.

The 208 planning is broad based and geared toward the more complex cases. EPA is authorized to provide grants to agencies having jurisdiction under State law to carry out such planning. The completed plan must designate one or more agencies to implement its recommendations. Smaller geographical areas within the 208 area may be designated as Section 201 facility planning areas.

EPA policy concerning coordination between applicants and 208 agencies is explained in Guidance for Preparing a Facility Plan Revised - May 1975, pp. 2 and 3.

Re: 40 CFR Part 126 and Part 131
Program Requirements Memorandum, PRM 75-38 (PG-66), 2/9/76

5. Facility Plans

Facility plans are required by Section 201 of PL 92-500. They may be considered as the implementation part of the States Continuing Planning Process. Facility plans are the first stage of the three part construction grant process. The facility planning area is designated by the State agency and may include one or more political jurisdictions. Overlapping may exist between 208 areawide planning areas and 201 facility planning areas. Coordination and cooperation are essential to avoid duplication, but the completion of 201 plans should not be delayed or postponed pending completion of 208 plans. Rather, the 208 plans, when completed, should incorporate the provisions of the completed 201 plans.

Ideally, the 303(e) plan establishes the waste loads, the 208 plan designates the 201 area and the implementing agency, and the 201 plan develops a specific project which is the most environmentally sound and cost effective for achieving the stated water quality standards. In the case where a 208 area has not been designated, the State agency will designate the boundaries of the 201 facility planning area, subject to the approval of EPA. If a 303(e) basin plan has not been completed, the waste load allocations, where necessary, are to be established on a case by case basis by the State jointly with the applicant.

The objectives of the 201 facility plan are specific and include the treatment plant site, size, type of process, method of effluent and sludge disposal, interceptor sewer routings and other steps necessary for constructing the project. The facility plan is prepared by the grantee with funds from a Step 1 project grant.

Facility planning is discussed in greater detail in Chapter IV and is the subject of the Publication, Guidance for Preparing a Facility Plan, Revised - May 1975.

Re: 40 CFR 35.917
40 CFR 130.31
Program Requirements Memorandum, PRM 75-38 (PG-66), 2/9/76

3. Administrative Requirements

The administrative requirements to be fulfilled by the applicant are extensive. All necessary forms, authorizations, timing requirements, and legal requirements should be discussed. The application form (5700-32) should be reviewed line by line. In addition, recommended formats for submittal of technical data should be reviewed. Payment procedures and policy should be fully explained. Finally, the entire application procedure for Step 1, 2 and 3 projects should be discussed. Special emphasis should be placed upon the coordination required between the applicant, the State and EPA to insure accuracy and timeliness in processing grant applications. Specific points to be covered include:

(a) that after June 30, 1975, a Step 1 project must be approved for a grant before any work is started if the costs of such work are to be eligible for grant assistance;

Re: 40 CFR 35.925-18

(b) that prior costs, if any, must be claimed in the initial application for grant assistance;

Re: 40 CFR 35.925-18

(c) that project work may not be accomplished by force account (municipal or public service employees) unless the applicant can demonstrate that:

(i) he possesses the necessary competence to accomplish the work

(ii) it is more economical to use the force account method;

Re: 40 CFR 35.935-2(a)
Program Requirements Memorandum, PRM 75-15 (PG-34), 5/7/74

(d) the institutional arrangements and agreements between jurisdictions;

Re: 40 CFR 35.917-6

(e) payment of non-federal share of project costs;

Re: 40 CFR 35.925-5

(f) priority lists;

Re: 40 CFR 35.925-3

(g) the procurement of professional services and contracts;

Re: 40 CFR 35.936, .937, *.938, .939, .965 and Appendices C & D*

(h) record keeping;

Re: 40 CFR 30.800, .805

(i) limitations on collection systems;

Re: 40 CFR 35.925-13

(j) user charges and industrial cost recovery;

Re: 40 CFR 35.925-11, -12

(k) public participation;

Re: 40 CFR 35.915(f), 917-5

(l) compliance with the requirements of the Civil Rights Act of 1974, including applicability to sewage collection systems for minority areas.

Re: 40 CFR 8
Program Requirements Memorandum, PRM 75-32, (PG-59), 2/11/76

4. Technical Requirements

All technical aspects of the Step 1, 2 and 3 work should be reviewed with the applicant with special attention to the requirements for a plan of study and the preparation of a facility plan. At a minimum, the following items should be discussed:

(a) the degree of technical detail required in both the plan of study and the facility plan;

(b) specific problems associated with the project in question and how they should be addressed in item (a);

(c) cost effectiveness in its broadest sense and the trade-off between engineering, environmental, monetary costs, and institutional arrangements;

Re: Guidance for Preparing a Facility Plan
Revised - May 1975

(d) infiltration/inflow analysis, sewer system evaluation survey;

Re: Guidance for Sewer System Evaluation March 1974
40 CFR 35.927

(e) environmental assessment integration in the facility plan and possible environmental impact statement proceedings, with emphasis on secondary impacts;

Re: Guidance for Preparing a Facility Plan
Revised - May 1975
40 CFR 35.917, .925-8
Program Requirements Memorandum, PRM 75-26 (PG-50), 6/6/75 and PRM 75-31 (PG-58), 9/3/75

(f) pretreatment and treatment of incompatible pollutants;

Re: 40 CFR 35.925-15

(g) BPWTT, including secondary treatment and waste stabilization ponds;

Re: Alternative Waste Management Techniques for Best Practicable Waste Treatment 6/75
40 CFR 35.917-1
Program Requirements Memorandum, PRM 75-3 (PG-16), 9/11/73

(h) other Federal requirements, such as historical preservation, archeological investigations, flood insurance, etc.

Re: 40 CFR Part 30 Subpart C
Program Requirements Memorandum, PRM 75-27 (PG-52), 7/2/75 and PRM 75-28 (PG-54), 7/8/75

(i) the proposed planning area;

(ii) an identification of the entity or entities that will be conducting the planning;

(iii) the nature and scope of the proposed Step 1 project, including a schedule for the completion of specific tasks; and

(iv) an itemized description of the estimated costs for the project.

The boundaries of the proposed planning area, item (i) above, are to be checked with those designated by the State and approved by EPA as described in Chapter II. In cases where the State has not previously designated the boundaries of the facilities planning area, they will be designated by the Regional Administrator.

Additionally, the Guidance for Preparing a Facility Plan suggests items which should be included in the plan of study. These include maps of the planning area with streams, lakes, ponds, etc., identified; maps of the existing sewerage systems including treatment plants; need for project because of State or Federal enforcement orders, public health hazard or water quality problems; and previously prepared documents which will be used in developing the facility plan.

In reviewing the plan of study, attention must be focused on those items which will need to be developed in the facility plan. The plan should indicate that the statutory requirements described in later chapters of this Handbook will be satisfied and that the applicant understands them and will be able to proceed in a manner which will satisfy them.

If, based on this review, the need for an Environmental Impact Statement (EIS) is apparent, the Regional Office may initiate the joint EIS/Assessment procedure ("piggybacking") outlined in PRM 75-31 (PG-58). The use of this procedure can result in considerable savings of time.

The applicant must complete the facility plan in a reasonable period of time and at a reasonable cost. To test for reasonableness, the time and cost should be compared with other projects of a similar nature and scope.

Re: 40 CFR 35.920-3(a), .945
Guidance for Preparing a Facility Plan, Revised - May 1975, p. 4
Program Requirements Memorandum, PRM 75-3 (PG-58), 9/2/75

2. Planning Considerations

Prior to awarding a grant, EPA must determine that the proposed project is in conformity with applicable basin plans approved in accordance with Section 303(e) of FWPCA and areawide waste treatment management plans approved in accordance with Section 208 of FWPCA (see Chapter II). The reviewer must be familiar with the planning area and be aware of the status of applicable plans.

In cases where a 303(e) basin plan has not been completed, the plan of study must indicate that the resulting project will comply with the National Pollution Discharge Elimination System (NPDES) permit (see Appendix B) if one has been issued.

In cases where a 208 areawide waste treatment management plan has been completed and approved, the applicant must be the agency designated in the plan and the project must be in conformity with that plan. Where 208 planning has been initiated, the 208 agency must be afforded the opportunity to review and comment upon the proposed plan of study. Where a 208 area has not been designated, no further action is required.

Re: 40 CFR 35.925-2, .925-19
Guidance for Preparing a Facility Plan,
Revised - May 1975, pp. 1-4

3. Prior Costs

The application form requires the applicant to provide a breakdown of the costs for preparing a facility plan. The plan of study also requires a breakdown of these costs by specific task. These costs are to be reviewed to insure that they are allowable costs as defined in Chapter VII. This section is concerned only with the timing of when these costs were incurred.

If the costs to prepare the facility plan will be incurred after the grant award, no special review procedures are required.

Costs for the preparation of the application, plan of study and other supporting documents are not allowable for EPA grant assistance.

Secondary treatment for sanitary sewage discharges is the minimum acceptable level of treatment for those segments of the receiving waters which the State has classified as effluent limited, but the State may require higher levels of treatment in order to achieve water quality standards. The State (or EPA) requirements may involve nutrient removals (nitrates and phosphates), higher BOD and suspended solids removal, reoxygenation of the effluent, etc. The segments of receiving waters, in which these higher levels of treatment are required, are water quality limited segments (see Chapter II A.3).

The facility plan must evaluate alternative solutions to the water pollution problem, and the effluent limitations may vary from one alternative to the other. The effluent limitations for existing discharges are contained in the discharge permit issued under the National Pollutant Discharge Elimination System (NPDES). For completely new systems, the State will establish the effluent limitations based on approved plan and water quality standards.

In preparing the facility plan, the grantee is required to evaluate the following waste treatment management techniques:

(i) Biological or physical-chemical treatment and discharge to receiving waters;

(ii) Treatment and reuse; and

(iii) Land application techniques.

In all cases, it is the State's responsibility to establish the effluent limitations for all alternatives and to furnish them to the grantee.

Review Procedures:

The reviewer must establish that the correct set of effluent limitations has been used by comparing the stated limitations with:

a. the discharge permit in the case of existing discharges;

b. limitations established in 303(e) basin plan;

c. the reuse or groundwater recharge requirements if this alternative has been selected.

Errors, inconsistencies, or other irregularities are to be corrected with the State agency.

Re: 40 CFR Part 133
40 CFR 35.917, .925-2, .925-7
GPFP pp. 1, 2, 5

4. Current Situation

4.1 Conditions in the Planning Area

Purpose and Discussion:

The existing conditions in the project area are described in order to form a basis of comparison between alternatives. If the topics listed below are described in detail, they will provide a clear distinction between the "before" and "after" conditions. The "after" conditions are described in later chapters.

Sources of information should be cited or referenced.

Review Procedures:

Suggested topics which describe the existing conditions may include:

a. A description of the planning area - planning area boundaries, political jurisdictions, and physical characteristics (climate, geology, soils, topography, hydrology, etc.);

b. Organizational context - the role and relationship between all existing organizations involved in planning, financing, and operating publicly owned treatment works;

c. Demographic data - the most current population estimates and the latest decennial census; population growth patterns and densities; *minority areas not presently sewered;* number and types of major industries and other employment generating entities; existing land-use patterns and controls including comprehensive planning and zoning regulations;

d. Water quality - identify quality and quantity of existing surface and groundwaters;

- installation of water meters (proven to reduce water consumption);

- initiating industrial pretreatment requirements, reuse or recycling.

Re: 40 CFR 35.917-1 (d)(2)
GPFP p. 13

c. Configuration of Sewers and Interceptors

When service areas have been established, the configuration of the collection sewers is pretty well prescribed with regard to routings and size (minimum size in most States is 8 inches). Attention should be directed toward trunk and intercepting sewer alternatives to insure that they conform to existing and future land use plans. Preliminary pipe sizes and costs may have to be estimated to reduce the alternatives to a manageable number.

Re: GPFP p. 13

d. Sludge Disposal

Of the four generally accepted methods of sludge disposal, one or more may possibly be eliminated from further consideration based on physical constraints or regulatory considerations. The plan should address each of the following alternative sludge disposal methods:

- land application (agricultural, soil conditioner, etc.);

- sanitary landfill;

- sludge incineration;

- ocean dumping (only under very special circumstances).

(NOTE: Criteria for determining eligibility of land for use in sludge disposal is discussed in Chapter VI.)

Re: 40 CFR 35.917-1(d)(6)
GPFP pp. 13, 14

e. Best Practicable Waste Treatment Technology (BPWTT)

The statute requires that each project evaluate, as a minimum, the following three waste treatment management techniques:

- biological or physical-chemical treatment and discharge to receiving waters;

- treatment and reuse; and

- land application techniques.

As the "state-of-the-art" develops for each of these techniques, EPA will publish technical bulletins describing the application and evaluation of each. In selecting which of these alternate waste treatment management techniques is most cost-effective for the proposed project, the grantee must consider the application of the best practicable waste treatment technology (BPWTT).

EPA has established that the BPWTT for "treatment and discharge to receiving waters", requires a minimum of secondary treatment (see Section 3) or such advanced waste treatment methods as is necessary to achieve the effluent limitations required to meet applicable water quality standards. Since "reused" wastewater and run off of "land application" techniques eventually enter receiving waters, the same level of treatment is required for these techniques. In addition, where discharges to groundwaters from "land application" may occur, the level of treatment must be consistent with the existing or potential uses of such groundwaters.

As each of these three techniques is evaluated, the grantee must also consider how well the system lends itself to the application of future technology for reclaiming or recycling the effluent.

Re: 40 CFR 35.917-1(d)(5)
Alternative Waste Management Techniques for
Best Practicable Waste Treatment, June 1975

f. Combined Sewer Overflows and Stormwater Discharges

Projects involving treatment and control of combined sewer overflows and stormwater discharges may be considered only after the planning process has clearly established their cost-effectiveness. Such projects must be considered on a case-by-case basis after a careful review of all alternative control techniques has shown that, even after industrial effluent limitations and a minimum of secondary treatment for dry weather municipal flows are achieved, the selected alternative is needed to protect the beneficial use of the receiving waters. See PRM 75-34 (PG-61).

g. Industrial Service

The joint treatment of industrial and domestic wastes should be considered and encouraged where possible. In considering industrial discharges, the grantee should evaluate to the extent appropriate: (1) the compatability of industrial wastes with domestic wastes; (2) the requirements for pretreatment; (3) the volume, strength and method of discharge (batch or uniform); (4) the cost of industrial pretreatment and joint treatment versus separate industrial treatment; and (5) the method of implementing and enforcing limitations on industrial discharges.

public a role in decision making in efforts to restore and maintain the integrity of the Nation's waters. The facility plan must contain a summary of the measures taken to provide for, encourage, and assist public participation in the plan selection. The summary must also disclose the public response to the alternatives presented and how significant responses were incorporated into the plan.

In addition to any informal meetings or other forms of public participation, a formal public hearing must be held prior to plan selection unless the hearing requirement has been waived by the Regional Administrator.

Review Procedures:

Review the hearing summary and supporting documents to determine that:

a. at least one formal public hearing was held, unless waived;

b. reports, documents or other data to be discussed at hearing were available to the public at convenient times and places approximately 15 days prior to the hearing;

c. thirty days notice of the hearing was announced through the press or other news media;

d. notification was made to interested governmental agencies and interested groups (see clearinghouse comments);

e. all interested parties were afforded an opportunity to express their views;

f. adverse or significant views are addressed and incorporated into the facility plan, *including addressing of the servicing of minority areas not previously sewered.*

Re: 40 CFR 35.917-1(g), .917-5
40 CFR Part 105
GPFP pp. 17, 18
Program Requirements Memorandum, PRM 75-32 (PG-59), 2/11/76

7.2 Evaluation and Ranking of Proposals

Purpose and Discussion:

Evaluation of alternatives, ranking, and plan selection involve making choices based on costs, environmental impacts and feasibility of implementation. The grantee may select any number of methods to display costs and effects of the alternative proposals. Regardless of the display method, the effect should be listed, wherever possible, in quantitative

terms based on the supporting analysis elsewhere in the plan. Where quantification is not possible, the comparison should be made by brief narrative descriptions.

The end result of the evaluation is the assignment of a value judgement to each alternative, ranking them from most acceptable to least acceptable.

Re: GPFP p. 25

7.3 Selected Plan (major feature summary) and Reasons for Selection

Purpose and Discussion:

The selected plan, its major features, and reasons for selection are presented in summary form for clarity and the convenience of reviewers.

Review Procedures:

Review the summary for inclusion of:

a. major features;

b. clear explanation of the reasons for plan selection.

Re: GPFP p. 25

7.4 Environmental Impacts of Selected Plan

Purpose:

The primary and secondary environmental impacts of the selected plan are presented in summary form and specific issues are addressed as required by the National Environmental Policy Act of 1969 (NEPA).

Discussion:

The same issues and review procedures covered in Section 6, alternatives, are addressed in the selected plan. However, in review of the selected plan, they are analyzed in greater detail. Special note should be made by the reviewer of impacts upon cultural or environmentally sensitive resources as these require special procedures and considerations (see Section 10).

Review Procedures:

Review cost estimates to determine that:

a. costs for the construction of the facilities are reasonable and include both capital and operation and maintenance costs;

b. costs are presented in the required format;

c. schedules for the completion of related work have been included.

Re: *Program Requirements Memorandum, PRM 75-30 (PG-57), 9/8/75*
40 CFR 35.917-1(a)
GPFP p. 16

9. Arrangements for Implementation

9.1 Institutional Responsibilities

Purpose:

The agency and its responsibilities for plan implementation are identified to demonstrate recognition of the steps necessary for initiation and completion of the project.

Discussion:

The responsibility for the implementation of the selected plan may rest with one or more agencies. In the case of a single agency, it must have the authority under State law (or the ability to obtain such authority) to finance, design, construct, operate and maintain the proposed facilities. For regional solutions, several agencies may share the responsibility for plan implementation and each must have the authority and ability to carry out its functions. A common example of this is where one agency constructs the treatment plant and interceptor sewers to serve the entire planning area, and the smaller jurisdictions construct the trunk and lateral sewers.

In regional solutions, one or more jurisdictions in the planning area may either oppose or fail to approve the plan. The grantee should discuss the appropriate measures required to reach agreement among the jurisdictions. While final agreement is desirable prior to the submission of the facility plan for review, the State and EPA may approve it even in the absence of such agreement.

Review Procedures:

For implementation, the plan should:

a. identify each agency or jurisdiction and its responsibility;

b. show that each agency has ability and authority (or reasonable expectation to obtain such authority) under State law to finance, design, construct, operate and maintain the proposed facilities;

c. identify any referendums or public elections necessary for plan implementation;

d. include adopted resolutions of plan acceptance agreements between jurisdictions;

e. include financial arrangements and obligate each jurisdiction to enforce the requirements for user charges, industrial cost recovery, sewer system rehabilitation and sewer use ordinances;

f. identify jurisdictions which oppose or have failed to approve the plan and describe steps necessary to reach agreement.

Re: 40 CFR 35.917-6

9.2 Implementation Steps

Note: To demonstrate recognition of the proposed project and an orderly program for implementing it, the grantee is to present a step by step schedule of each specific action. The time schedule should correspond with schedules in the NPDES permit. Differences must be resolved.

Re: 40 CFR 35.917-1(a)

9.3 Operation and Maintenance

Purpose and Discussion:

As a part of the Step 3 grant application, a detailed Plan of Operation must be submitted. The preliminary O&M plan described in the facility plan should include the minimum information needed to perform cost-effectiveness computations, e.g., discussions of staffing, management, training, sampling, laboratory facilities, etc.

Re: GPFP p. 17

9. flood protection insurance requirements, as applicable;

   Re: 40 CFR 30.405-10
   Program Requirements Memorandum, PRM 75-28 (PG-54), 7/8/75

10. records to be maintained during design and construction, separating eligible and ineligible items;

    Re: 40 CFR 30.805, 35.940

11. site certification requirements, if not previously satisfied;

    Re: 40 CFR 35.920-3 (b)(4)

12. future requirements for

    - the user charge and industrial cost recovery system;
    - a sewer use ordinance;
    - an evaluation/rehabilitation program, as applicable;
    - an operation and maintenance program, including O&M manual, staffing and training;

    Re: 40 CFR 35.935-12, -13, -16

13. requirements for submission of project status reports and requirements for periodic inspections and audits, as necessary, for large or complex projects;

    Re: 40 CFR 30.635, .820

14. requirements for construction contracts to conform with the standardized format, "Contract Documents for Construction of Federally Assisted Water and Sewer Projects", *and that such contracts may not include escalation clauses;*

    Re: *Program Requirements Memorandum, PRM 75-4 (PG-17A), 4/15/75*
    PRM 75-23 (PG-44), 12/19/74

15. use of value engineering in the design phases of the project;

Re: *Program Requirements Memorandum, PRM 75-30 (PG-57), 9/8/75 and PRM 75-36 (PG-63), 1/20/76*

16. possible benefits from the use of construction management.

The reviewer should provide the grantee with guidelines, instructions, booklets, or other publications which describe specific requirements in detail.

I. REVIEW OF PLANS AND SPECIFICATIONS

Purpose:

To insure that the project to be built will satisfy effluent and statutory requirements.

Discussion:

Depending upon the complexity of the project, periodic reviews and inspections will have been carried out during the preparation of the plans and specifications and changes or modifications, if required, will have been made. The set of plans and specifications submitted for final review should reflect all changes and be suitable for bidding purposes.

The review procedures are both administrative and technical. The technical review procedures are broad in scope and each region is encouraged to pattern its own review procedures to account for State or local design practices and requirements. Although not specifically required, the use of a checklist such as the "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports", Appendix C, is recommended.

The system must fulfill the objective of distributing the costs of O&M among all users in proportion to their waste load contributions. Factors to be included in the calculation of charges are the volume, flow rate and strength of the wastes of all users. Each user, or class of users, must be charged on an equitable basis to fairly apportion the O&M costs. An effective user charge system will bring about operational self-sufficiency.

Where more than one political jurisdiction is included in the project service area, the user charge system must be legally adopted by each jurisdiction. In the first year of operation, the user charges may be based upon past experience or reasonable estimates. However, each year thereafter, the applicant is to review the user charges and initiate revisions, as necessary, to reflect actual operation and maintenance costs of the treatment works and actual waste load contributions from each user or class of users.

No more than 50% of the Federal share of a Step 3 grant may be paid until the grantee has submitted to the Regional Administrator adequate evidence of timely development of its user charge system. No more than 80% of the Step 3 grant may be paid until the user charge system is approved by the Regional Administrator.

Review Procedures:

The user charge system submission must be reviewed to insure compliance with the following criteria:

a. the program apportions fairly the O&M costs among all users according to waste load or flow characteristics. A system such as one based upon ad valorem taxes (dependent upon taxable property ownership) is not acceptable because it does not adequately consider waste characteristics. Appendix B of 40 CFR Part 35 includes acceptable user charge system models;

b. the implementation of the program will provide sufficient revenues to offset all actual O&M costs;

c. the system will be adopted, implemented and enforced by all political jurisdictions within the service area of the treatment works. Resolutions, local ordinances, written statements or other agreements may be accepted as evidence of compliance by the political jurisdictions involved.

Upon review and approval of the user charge system, the grantee is to be notified in writing of such approval and requested to submit a certified statement of compliance once the system has been officially implemented. Payment requests are to be processed as appropriate.

Re: 40 CFR 35.905-26, .925-11, .935-13, Appendix B
Program Requirements Memorandum, PRM 75-19 (PG-37), 7/9/74; PRM 75-20 (PG-38), 7/16/74 and PRM 75-37 (PG-65), 3/17/76

5. Industrial Cost Recovery System

Purpose:

The industrial cost recovery system imposed by PL 92-500, provides a means whereby industrial users of a publicly-owned treatment works repay the proportionate Federal share of the construction costs of the treatment works allocated to their use.

Discussion:

The industrial cost recovery (ICR) system provides a system by which all industrial users of the treatment works will repay, over a defined period, their portion of the Federal share of construction costs of the works. These costs are to be recovered by the grantee over the useful life of the treatment works but not to exceed 30 years. The grantee is obligated to collect these payments no less often than annually

2. Allowability Determinations

Paragraph 3 below lists miscellaneous cost items on which determinations of allowability/unallowability have been made. Since no single document can cover every situation that may arise, cost items not discussed below should be considered on an individual basis. As needed, the reviewer may seek advice from the Construction Operations Branch, Municipal Construction Division.

The cost items listed below are applicable to both PL 84-660 and PL 92-500 projects. In making eligibility determinations, consideration should be given to commitments previously made to grantees in the absence of prior National policy, pertinent statutes or regulations.

Final determinations by the Regional Administrator concerning the allowability of costs are conclusive unless appealed within thirty days in accordance with the "Disputes" article (Article 7) of the EPA General Grant Conditions. See 40 CFR 35.940.

3. Allowability/Eligibility of Miscellaneous Costs

The following statements of allowability/eligibility relating to certain construction grants project costs are included for the reviewers ready reference:

- Indirect Costs:

  Indirect costs are those incurred for a common or joint purpose, benefiting more than one project or cost objective and not specifically identifiable to the particular project or cost objective benefited. Indirect costs consist of items of a general overhead nature such as office space, utilities, telephone, etc. The costs are allowable only if determined on the basis of a negotiated indirect cost agreement and incorporated in the grant agreement. See 40 CFR 30.715-2.

- Travel Costs:

  Grantee travel costs - allowable travel costs include travel considered necessary and directly related to the accomplishment of project objectives. Travel not directly related to construction and/or "start up" of the facility, including trips to professional meetings, symposia, lectures, etc., is not allowable as a direct charge to the project. Travel not directly related to a specific project may, however, be recovered under an Indirect Cost agreement. (Federal Management Circular (FMC) 74-4, 7-18-74).

Architect/Engineer travel costs - allowable travel costs include travel considered necessary and project related, including on-site travel costs. Costs of relocation of employees and their families may be considered allowable when such travel is justified and approved by the grantee. The cost of transportation between living quarters and the construction site is normally unallowable. In unusual circumstances, where job sites are located in isolated areas and living quarters are not available within 30 miles, travel costs between living quarters and the job site are considered allowable. (41 CFR 1-15.2 and 41 CFR 1-15.4)

- Bond Costs:

All costs under PL 92-500 Grants associated with the approval, preparation, issuance and sale of bonds (including bond counsel and underwriters' fees) are ineligible for grant participation. Interest on bonds or any other form of indebtedness is unallowable. (FMC 74-4, 7-18-74)

- Liquidated Damages:

Monies received by grantees in the form of liquidated damages shall have no effect on the determination of allowable costs of grant projects. However, any additional costs - construction, engineering, legal, or administrative-generated because of a contractor's lack of performance should be covered by the liquidated damages received. Thus, any such increase in cost as a result of lack of performance is unallowable for participation even in the event that the grantee elects not to exercise his right to recover liquidated damages.

- Bid Bond Forfeiture:

All bid bond forfeitures should be treated as a reduction to project construction costs.

3. Design and construction costs allocable to Federal facilities producing less than 250,000 gpd or 5 percent of the total design flow of waste treatment works, whichever is less.

That portion of the construction costs allocable to the Federal facility shall be based on all factors which significantly influence the cost of the treatment works. Factors such as strength, volume, and delivery flow rate characteristics will be considered and included to insure a proportional allocation of costs to the Federal facility.

As a minumum, the portion of construction cost allocable to the Federal facility should be based on the ratio of its flow to the total design flow of the treatment works. The portion (percentage) allocable to the Federal facility must be agreed upon by the municipality and Federal agency, and approved by EPA prior to award of a Step 2 or Step 3 grant, whichever is applicable, for the works or any portion thereof. See *PRM 75-35* (PG-62) - 12-29-75 for additional details.

- Site Acquisition vs. Site Preparation Costs:

All costs associated either directly or indirectly with the acquisition of any land used for or incidental to the construction of treatment plants, lagoons, force mains, gravity sewers, outfall lines, appurtenant piping and structures, and pumping stations whether by purchase, rental, lease or easement (except as noted above) are ineligible. Similarly, all legal, realty, engineering, and grantee costs associated with such ineligible acquisition are unallowable as are the costs of easements, rights-of-way, nonconstruction related surveying, plat preparation, meetings, etc. (NOTE: The cost of land used as an integral part of the treatment process, such as spray irrigation sites - see *PRM 75-25 (PG-49) - 7-18-75, or land for the ultimate disposal of residues from waste water treatment (see PRM 75-39 (PG-67), 4-2-76)*, may be eligible if approved and in accordance with pertinent regulations and/or guidelines. Legal, administrative and engineering costs associated with the acquisition of grant eligible land are allowable for grant participation.

Costs associated with the preparation of the treatment works site (including appurtenant features) before, during, and to the extent agreed upon in the grant agreement or amendment thereto, after construction are generally eligible. These costs include such items as: grade and construction staking surveys, surveying for alignment and slope, preparation of working drawings and plans dealing with site preparation, locations, grades, slopes, distances, depths, alignments, etc. Also eligible are costs such as finegrading, seeding, and protective trees and shrubs.

Costs related to reasonable site screening or aesthetic purposes are also allowable. Criteria for participating in aesthetics related work include: Support expressed in NEPA related studies, approved facility plans, necessary screening of adjacent properties, whether the facility is in constant public view or remote therefrom, etc.

- Certificate as to Title to Project Site:

Legal costs associated with certifying as to the adequacy of the grantee's interest in the project site should be considered a normal function of government incident to the project and as such are unallowable. (Except in the case of grant eligible land (see above).

- Acquisition of Privately or Publicly Constructed Waste Treatment Facilities:

Costs incurred by a grantee or applicant associated with the purchase, lease or acquisition of privately or publicly constructed and owned waste treatment facilities are not allowable.

- Demolition of Existing Structures:

Demolition of existing structures constitutes an allowable cost provided that the structures are on the facility site (including rights-of-way for the eligible sewer lines) and that construction cannot be undertaken

3. Schedules

Schedules for the completion of any of the three grants steps are contained in the grant agreement/amendment. The work schedule is generally discussed with the applicant prior to the grant application and should reflect realistic targets. However, the reviewer has the responsibility for final approval of the schedule, including payments. Once the grant payment schedule has been approved and incorporated into the grant agreement/amendment, the grantee may request grant payment for work which has been completed. If completed work and the resulting payment requests occur prior to dates set forth in the approved schedule, the schedule may be revised by preparing a new grant agreement/amendment. Considerable flexibility may be exercised in setting up the schedules and the documentation required.

Any time that a progress schedule is revised, the Municipal Permits Office of EPA should be notified.

a. Step 1 and Step 2 - Periodic progress payments for Step 1 and 2 work are to be made on the basis of completion of the step or completion of specific tasks within the step grant as contained in the grant agreement. Every effort should be made to divide the scheduling into tasks, but where this is not possible or practical, the grantee should submit a certified statement as to percentage of completion of the work on a periodic basis.

b. Step 3 - Step 3 payment schedules should realistically reflect the likely construction progress. For example, early equipment purchases and seasonal weather conditions may require large grant payments for certain months. If the monthly requests exceed those on the schedule, the grant must be amended. Payment schedules should be structured so as to preclude any need for frequent changes.

4. Interim Payments

Problems with both payment requests and payments can be minimized if, at the time of the grant award, the payment request procedure is discussed with the grantee. Each region has specific internal procedures for handling requests and processing payments so the reviewer must be familiar with these. Payments generally follow the following sequence:

- the grantee submits EPA Form 2550-16 (Outlay Report and Request for Reimbursement for Construction Programs);
- the grantee provides necessary documentation to support the request;
- the reviewer approves the request;
- the Regional Fiscal Office is instructed to make payment.

(NOTE: The Federal share shall be based upon those costs which, at the time of the payment request, the grantee is currently obligated to pay. For example, if the grantee has retained a certain percentage from a construction pay estimate, EPA shall base its payment upon the amount of the estimate less the retained amount. PRM 75-22 (PG-43), 11-18-74.)

a. Payment Requests Review

It is the responsibility of the construction grants reviewer to monitor the progress of the project. One means of doing this is by periodically reviewing payment requests and supporting documents. The frequency of the periodic reviews will depend on the size and complexity of the particular project. In instances where a monthly payment schedule has been established, the reviewer should not perform a detailed check of the request and supporting documents each month. If a problem is discovered later when checking the supporting documents, it can be resolved on a subsequent payment. Judgement will be required to avoid unnecessary delays.

APPENDIX D

Handbook of Procedures
Construction Grants Program for
Wastewater Treatment Works

PROGRAM DIRECTIVES

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*U.S. Government Printing Office: 1976-679-815/488 Region 8